7052.0230 ADDITIVITY.

Subpart 1. **Applicability.** The purpose of a determination of additivity is to address the interactive effects of multiple GLI pollutants in individual point source discharges independent of other pollutants that may be present in the receiving waters.

Subp. 2. **Carcinogenic human health GLI pollutant additivity.** The agency must calculate the additive effects of carcinogenic human health pollutants in effluents

according to part 7050.0222, subpart 7, item D, for which individual WQBELs have been established under part 7052.0200, subpart 5. Cumulative incremental risk for carcinogens in the effluent must be maintained at 1×10^{-5}.

Subp. 3. **Noncarcinogenic human health GLI pollutant additivity.** The agency must determine the additive effects of noncarcinogenic human health pollutants where individual WQBELs have been established under part 7052.0200, subpart 5, and where the pollutants exhibit the same adverse effects through the same mechanisms of action.

Subp. 4. **Acute aquatic life additivity.** The additive effects of acute aquatic life toxicity of GLI pollutants in effluents where individual WQBELs have been established under part 7050.0211, subpart 1, or 7052.0200, subpart 5, as FAVs must be calculated according to part 7050.0222, subpart 7, item ~~D~~ B.

Subp. 5. **Toxic equivalency factors and bioaccumulation equivalency factors.** The agency must calculate the potential for adverse additive cancer and noncancer human health effects in effluents for both chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans listed in part 7052.0380 using the procedures in items A and B.

A. The human health cancer and noncancer standards for 2,3,7,8-TCDD must be used consistent with methods at part 7052.0200, subparts 2 and 3, to calculate total 2,3,7,8-TCDD toxicity equivalence WLAs for effluents.

B. The toxicity equivalency factors (TEFs) and bioaccumulation equivalency factors (BEFs) in part 7052.0380 must be used to calculate a 2,3,7,8-TCDD toxicity equivalence concentration for an effluent when implementing the WLAs derived in part 7052.0200, subpart 2, item A, or 3. The equation for calculating the 2,3,7,8-TCDD toxicity equivalence concentration in an effluent is as follows:

$$(TEC)_{TCDD} = \Sigma (C)_x (TEF)_x (BEF)_x$$

Where:

$(TEC)_{TCDD}$ = 2,3,7,8-TCDD toxicity equivalence concentration in the effluent

$(C)_x$ = The concentration of congener x in the effluent

$(TEF)_x$ = Toxicity equivalency factor for congener x

$(BEF)_x$ = Bioaccumulation equivalency factor for congener x

Congener x = a derivative, breakdown product, or similar chemical (in structure) to 2,3,7,8-TCDD. The congeners are listed in part 7052.0380.